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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/701,504

11/06/2003

Hirofumi Takei

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08/31/2009

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

SHIBRU, HELEN

ART UNIT

PAPER NUMBER

2621

MAIL DATE

DELIVERY MODE

08/31/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/701,504	Applicant(s) TAKEI, HIROFUMI	
	Examiner HELEN SHIBRU	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 2,4 and 6-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of group I, corresponding with claims 1, 3, and 5, in the reply filed on 06/22/2009 is acknowledged. The traversal is on the ground(s) that Applicant believes, 'the claims could be searched by one Examiner and it is not mandatory to make restriction'. This is not found persuasive because these inventions are distinct for the reasons given on the restriction requirement and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper. See also Applicant's argument mailed on 01/21/2009 where Applicant specifically pointed out the differences between the two groups of claims.

The requirement is still deemed proper and is therefore made FINAL.

Response to Amendment

2. The amendments, filed 01/21/2009, have been entered and made of record. Claims 1-19 are pending, claims 1, 3 and 5 are elected claims 2, 4, and 6-19 are withdrawn as being read on the non elected species and groups.

Response to Arguments

3. Applicant's arguments with respect to claims 1, 3, and 5 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuura (US PG PUB 2004/0114819) in view of Keith (US Pat. No. 5, 881, 176).

Regarding claim 1, Matsuura discloses an image processing apparatus for receiving and processing a plurality of images each composed of a plurality of image data, comprising: a band segmentation unit which segments an image into different frequency band components (see abstract where the prior art discloses a plurality of frequency components are obtained from block of data); and image composition unit which composites, after said band segmentation unit segments first and second images (see claim 1 of the prior art, abstract and paragraphs 0147, 0182-0183).

Claim 1 differs from Matsuura in that the claim further requires compositing the first and second images by replacing some or all image data in common frequency band components between the first and second images, and outputting the composited image during a transition from the first image to the second image.

In the same field of endeavor Keith teaches compositing the first and second images by replacing some or all image data in common frequency band components between the first and second images, and outputting the composited image during a transition from the first image to the second image (see col. 16 line 19-col. 17 line 26 where the prior art teaches decomposing the original image performed by subsampling by two in both horizontal and vertical dimensions and subband LH_0 contains Low and High frequency vertical position, and HL_0 contains combined high frequency and low frequency vertical information, see also figures 3A-3D and 22 where it shows the level of decomposition which are outputted as each are generated). Therefore in light

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of the teaching in Keith it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Matsuura by replacing two images in common frequency band and outputting the composited image during a transition in order to locate hot spots on the composite and infrared image.

Claims 3 and 5 are rejected for the same reasons as discussed in claim 1 above.

6. Claims 1, 3 and 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuura (US PG PUB 2004/0114819) in view of Hunter (US PG PUB 2003/0063201).

Regarding claim 1, Matsuura discloses an image processing apparatus for receiving and processing a plurality of images each composed of a plurality of image data, comprising: a band segmentation unit which segments an image into different frequency band components (see abstract where the prior art discloses a plurality of frequency components are obtained from block of data); and image composition unit which composites, after said band segmentation unit segments first and second images (see claim 1 of the prior art, abstract and paragraphs 0147, 0182-0183).

Claim 1 differs from Matsuura in that the claim further requires compositing the first and second images by replacing some or all image data in common frequency band components between the first and second images, and outputting the composited image during a transition from the first image to the second image.

In the same field of endeavor Hunter discloses compositing the first and second images by replacing some or all image data in common frequency band components between the first and second images, and outputting the composited image during a transition from the first image to the second image (see paragraphs 0059-0081, 0090, figure 5, and claims 1, 18 and 19, where

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the prior art teaches de-mosaicing an image mosaic and after adjusting the luminance values of pixels in high spatial frequency combining high frequency luminance pixels with each of the low frequency luminance images).). Therefore in light of the teaching in Keith it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Matsuura by replacing two images in common frequency band and outputting the composited image during a transition in order to reconstruct good image quality and/or to generate a de-mosaiced image for each of the color values.

Claims 3 and 5 are rejected for the same reasons as discussed in claim 1 above.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kim et al. (US Pat. No. 6, 553, 071) discloses compositing low and high frequency band components and replacing all the images in common frequency band components.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HELEN SHIBRU whose telephone number is (571)272-7329. The examiner can normally be reached on M-F, 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, THAI Q. TRAN can be reached on (571) 272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HELEN SHIBRU/
Examiner, Art Unit 2621
August 28, 2009

/Thai Tran/
Supervisory Patent Examiner, Art Unit 2621